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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/079,658	02/20/2002	Etsaku Shimizu	P6621a	7071
20178	7399	12/23/2003		EXAMINER
EPSON RESEARCH AND DEVELOPMENT INC INTELLECTUAL PROPERTY DEPT 150 RIVER OAKS PARKWAY, SUITE 225 SAN JOSE, CA 95134			LINDINGER, MICHAEL L	
			ART UNIT	PAPER NUMBER
			2841	

DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/079,658	SHIMIZU
Examiner	Art Unit	
Michael L. Lindinger	2841	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION

- The period of time may be extended under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply filed by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
 - 2a) This action is FINAL. 2b) This action is non-final.
 - 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.
- Disposition of Claims**
- 4) Claim(s) 1-11 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 - 5) Claim(s) _____ is/are allowed.
 - 6) Claim(s) 1-11 is/are rejected.
 - 7) Claim(s) _____ is/are objected to.
 - 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) Interview Summary (PTO-413) Paper No(s). _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

Double Patenting

1. Applicant is advised that should Claim 1 be found allowable, Claim 11 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claim 5 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The Applicant claims in Claim 1, a "generating-stop preventing unit" that by definition prevents the generator from stopping. In Claim 5, the Applicant says that during a time period when the generator is stopped. The Examiner would like to point out the contradictory nature of the dependent Claim 5. Also, the Examiner would like to make the Applicant aware that the "generating-stop preventing unit" is understood to be the improvement over the Prior Art. However, as pointed out further in the below rejections, the "generating-stop preventing means" was not discussed at length in the Disclosure, and Applicant is advised to be sure and state in clear terms in a response that the said "improvement" to the Prior Art achieves what it is defined to do (prevent the generator from stopping).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-4 and 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu U.S. Patent No. 6,483,276 B1. Regarding Claims 1, 6, and 11, Shimizu '276 teaches an electronically controlled mechanical timepiece unit electronic unit comprising a mechanical energy source 1a, a generator 20 driven by the mechanical energy source to generate induction electric power to supply electrical energy, and a rotation control unit 50 driven by the electrical energy to control the rotation period of the generator and a time indication unit operated with the rotation of the generator, the rotation control unit comprising a brake control unit/means 55 that compares a reference signal f_s , generated according to a signal sent from a time reference source, with a rotation detection signal corresponding to the rotation period of the generator to apply brake control to the generator, a chopping signal selector 80 that is able to set and select a braking amount to be applied to a generator, and a braking period detector 100 that serves as a priority determination circuit for determining the priority of the braking torque applied to the electric power generator (Col. 3, lines 35+; Col. 4, lines 1+; Col. 7, lines 5-40; Col. 8, lines 53+; Col. 9, lines 1+; Col. 11, lines 25-53; Col. 14, lines

1+; Col. 18, lines 1+; Col. 19, lines 1+; Col. 25, lines 1+). Shimizu '276 does not explicitly teach a generator-stop preventing unit/means that sets the amount of brake applied to the generator to first brake setting value when a measured rotation period of the generator is equal to or longer than a first setting period, which is longer than a reference period, to prevent the generator from stopping. It would have been obvious to a person skilled in the art at the time of the invention to understand that the apparatus of the Shimizu '276 includes elements that control the generator in a way that provides chopping signals in order to allow the generator to be braked in a strong or weak manner, wherein the chopping signals enable a user to accurately control the rotation of the generator. Although the term "generator-stop preventing unit" is not explicitly used in the Shimizu '276 reference, the generator of the apparatus could be controlled in a way that would enable it to be prevented from stopping based on the programmed and selected signal values. The chopping signal selector chooses from a plurality of chopping signals with a plurality of duty ratios in order to maintain a desired rotation of the generator. Observing the Applicant's Disclosure, the same method of utilizing chopping signals is found to control the rotation of the generator, therefore, providing an explicit generating-stop preventing unit is redundant, because the stopping of the generator (in other words, an amount a generator is to be braked) can be controlled by a chopping signal selector.

Regarding Claim 2, Shimizu teaches a brake setting value is set to a value that makes the amount of brake applied zero (Col. 18, lines 25-30).

Regarding Claims 3-4, Shimizu teaches a chopping signal selector that controls the rotation of the generator further comprising upper and lower level values that must be reached for a specific braking condition, out of a plurality of braking values, to be activated, wherein the amount of the brake applied to the generator is in synchronization with the rotation period of the generator (Col. 3, lines 35+; Col. 4, lines 1+; Col. 7, lines 5-40; Col. 8, lines 53+; Col. 9, lines 1+; Col. 11, lines 25-53; Col. 14, lines 1+; Col. 18, lines 1+; Col. 19, lines 1+; Col. 25, lines 1+).

Regarding Claims 9 and 10, the modified Shimizu teachings inherently possess the methods controlling a braking value of a rotational generator of an electronically controlled mechanical timepiece of as well as the corresponding mounting and assembling steps needed to construct the assembly.

Regarding Claims 7 and 8, it would have been obvious to a person skilled in the art at the time of the invention to not only understand that the plurality of integrated circuits of the Shimizu apparatus are programmed and set to execute a specific control program to control the output and desired results of the electronically controlled mechanical timepiece, but to also understand that the programmed integrated circuits are programmed with a specific computer code that are transferable by a recording medium such as a floppy disk.

Prior Art

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - Shinkawa U.S. Patent No. 6,154,422 discloses a power-generating device, charging method and clocking device comprising a generator and braking means.
 - Schafrath U.S. Patent No. 6,194,878 B1 discloses an electronic speed control circuit comprising a quartz oscillator, a generator, and a control circuit for regulating rotation of generator.
 - Koike U.S. Patent No. 6,373,789 B2 discloses an electronically controlled mechanical timepiece and method controlling the same comprising a generator and a brake control circuit.
 - Moteki U.S. Patent No. 6,633,511 B1 discloses an electronic controlling type mechanical timepiece comprising stators, rotors, a generator and power saving features.
 - Shinkawa U.S. Patent No. RE 38,110 E discloses an electronically controlled mechanical timepiece and method controlling the same comprising a generator and a brake control circuit.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael L. Lindinger whose telephone number is (703) 305-0618. The examiner can normally be reached on Monday-Thursday (7:30-6).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (703) 308-3121. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


Michael L. Lindinger
Patent Examiner
Art Unit 2841

MLL
December 11, 2003


DAVID MARTIN
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